

ABSTRACT

An apparatus including vertically separated acoustic resonators are disclosed. The apparatus includes a first acoustic resonator on a substrate and a second acoustic resonator vertically separated above the first acoustic resonator. Because the resonators are vertically separated above another, total area required to implement the resonators is reduced thereby savings in die size and cost are realized. The vertically separated resonators are supported by standoffs that are fabricated on the substrate, or on a resonator.